



## Drainage and Water Quality Improvements at Northgate Park, Community Center and Library

### What are the drainage improvements within the revised bid package for the project?

- 30% reduction in impervious surface from the site today.
- Water quality treatment through a Vortech System to treat suspended solids and filter oil and grease.
- Stormwater flow control through an underground vault to reduce the velocity of water leaving the site, and to help prevent overloading the storm water system downstream. The detention vault is designed to detain the 100-year 24-hour storm event.
- Detention and additional water quality treatment of water from 5<sup>th</sup> Avenue NE.
- The current design satisfies the storm water mitigation identified in project SEPA checklist

### What is the current drainage system at this site? **None.**

- Currently, 70% of the site is impervious surface (2.5 acres of the 3.55 acre total).
- Today there is no detention or water quality on the site and water from the site drains directly into Thornton Creek untreated.

### What are the detention and water quality requirements for the development?

- For the Northgate Park, Community Center and Library, detention is required, but water quality treatment is not due to the size of the parking lot and roof areas. (parking lots less than one acre and roofs do not require water quality treatment).
- The improvements on 5<sup>th</sup> Avenue require detention, but this area is not large enough to trigger any water quality improvements.

### What is the goal of this drainage infrastructure?

- To improve the quality of storm water entering Thornton Creek
- To reduce the peak rate of water leaving the site and entering Thornton Creek

### What features were included in the initial drainage design?

The initial design included an underground treatment vault for the 5<sup>th</sup> Avenue project, a rain-garden for treatment of the project site and a detention vault.

---

#### *Additional questions?*

- Call the Richard Gelb at Seattle Parks and Recreation (206) 684-0631
- Or by e-mail [richard.gelb@seattle.gov](mailto:richard.gelb@seattle.gov).
- Check out project updates at: [www.cityofseattle.net/parks/centers/current/Northgate\\_Community\\_Center.htm](http://www.cityofseattle.net/parks/centers/current/Northgate_Community_Center.htm)

### **Why is the rain garden being eliminated from the current design?**

- The high bids received in July required some redesign to reduce costs. Also the cost of the rain garden increased from \$37,000 to \$78,000 when additional geotechnical information identified that changes were needed to avoid the possibility that the foundation of the community center might settle due to possible saturated soils in the rain garden.
- The effort to reduce costs for the Park, Community Center and Library focused on making changes that did not impact the programs or services provided, and that allowed us to deliver the facilities promised to voters
- Any effort to relocate the rain garden to reduce impact on foundation costs for the Community Center caused significant loss in the useable Park area.

### **What about rainwater harvest?**

If bids for construction are within the budget, the City will exercise a “bid alternate” that would allow the detention vault to be enlarged to:

- Further slow the storm water release rates during the wet season
- Allow rainwater capture in the spring, which would then be used to irrigate the park through the summer months

### **Site Information**

- Total site size: 154,594 sq. ft. (3.55 acres)
- Steep slope areas to the south/east: make up 25% of the site: 42,274 sq ft (.91 acres)
- Soils Engineer recommended that due to the presence of fill soil material, steep slopes and the site constraints that on site infiltration was difficult to achieve.
- The drainage area for the project site is 1.9 acres and one acre for the 5<sup>th</sup> Avenue NE project.

---

### **Additional questions?**

- *Call the WSDOT Rail Office at 1-800-822-2015 (705-7901 in Thurston County).*
- *E-mail the WSDOT Rail Office at [rail@wsdot.wa.gov](mailto:rail@wsdot.wa.gov).*
- *Visit [www.amtrakcascades.com](http://www.amtrakcascades.com).*

*Last Revised: November 2, 1999*